



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,768	08/09/2001	Kazuho Miki	HITA.0094	4344

7590 03/22/2006
Stanley P. Fisher
Reed Smith Hazel & Thomas LLP
Suite 1400
3110 Fairview Park Drive
Falls Church, VA 22042-4503

EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT	PAPER NUMBER
----------	--------------

2616

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary

Application No.

09/924,768

Applicant(s)

MIKI ET AL.

Examiner

Andrew C. Lee

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-20 is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 11, 15, 6, 2, 7, 12, 16, 3, 8, 13, 5, 10, are rejected under 35 U.S.C. 102(e) as being anticipated by Ma et al. (US 6954463 B1).

Regarding claims 1, 11, 15, 6, Ma et al. disclose the limitation of a packet switching apparatus with a plurality of pairs of input/output ports (Fig. 2, element 40 ingress Port as input port, element 62 Egress Port as output port), the packet switching apparatus for forwarding packets it received to their destination, based on a session as point-to-point connection set up between a terminal and a destination network (column 5, lines 41 – 54; building out a VoIP or L2TP tunnel packet, the resulting new L2 header frame prepending to the packets is queued to network interface for transmission onto IP network), comprising: a pathfinding table (Fig. 2, element 58, forwarding engine; Fig. 3 element 84, element 90, distribution engine) for containing entries on a plurality of entry lines, to which, route information to be known when a first packet of a session is received (column 6, lines 35 – 39; packets arriving at egress ports, distributing packets to the forwarding engine) and associated output information consisting of the identifier of an output port through which to send out the packet received (column 8, lines 59 – 65; tag

Art Unit: 2664

indicating the proper output port), the identifier of an output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network (Fig. 10, column 13, lines 23 – 35; table 310, indexed by L2TP session ID /L2TP tunnel ID), and the identifier of an output session are defined (column 13, lines 36 – 42; PPP session); and a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received (Fig. 6, column 8, lines 59 – 67, switch fabric), performs processing for the received packet, according to packet output route information specified on the searched out entry line (Fig. 6, column 8, lines 59 – 67; column 13, lines 9 – 23), and sends out the received packet through the output port identified by the output port identifier on said specific entry line (column 11, lines 52 – 65; packet classifier uses the packet type to perform a search, in the table corresponding to that packet; column 12, lines 60 – 67, column 13, lines 1 – 12; outbound ingress interface that the packet is bound for), where each of the entries of the pathfinding table (Fig. 10, element 310, element 312, element 314, element 316) contains a corresponding among an identifier of an input tunnel of an input packet (Fig. 11, element 326, tunnel ID, column 13, lines 31 – 35; column 14, lines 1 – 5), and identifier of an input session of input packet (Fig. 11, element 326, L2TP Session ID, column 13, lines 31 – 35) and an identifier of an output port of the input packet (Fig. 11, element 324, VoIP UDP Port, column 14, lines 1 – 3).

Regarding claims 2, 7, 12, 16, Ma et al. disclose the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets to be transmitted through said session or sessions based on a Point to Point Protocol (PPP) (column 5, lines 40 – 45; receive a PPP frame indicating Point to point Protocol).

Art Unit: 2664

Regarding claims 3, 8, 13, Ma et al. disclose the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Layer 2 Tunneling Protocol (L2TP) (column 5, lines 40 – 45; recited “L2TP tunnel packet”).

Regarding claims 5, 10, Ma et al. disclose the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets transported through input tunneling based on Generic Routing Encapsulation (GRE) (column 5, lines 40 – 45, recited DSP receiving a PPP frame, it encapsulates the frame with a layer (L2) Ethernet header addressed).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 9, 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (US 6954463 B1) in view of Comstock (US 6452920 B1).

Regarding claims 4, 9, 14, Ma et al. disclose the limitation of a packet switching apparatus with a plurality of pairs of input/output ports (Fig. 2, element 40 ingress Port as input port, element 62 Egress Port as output port), forwarding packets it received to their destination, based on a session as point-to-point connection set up between a terminal and a destination network (column 5, lines 41 – 54; building out a VoIP or L2TP tunnel packet, the resulting new

Art Unit: 2664

L2 header frame prepending to the packets is queued to network interface for transmission onto IP network), Ma et al. do not disclose expressly the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP. Comstock discloses the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP (column 4, lines 7 – 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ma et al. to include the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP such as that taught by Comstock in order to provide data communications between a host and a mobile node, and in particular to data communications between the host and the mobile node that cross internetworks (as suggested by Comstock, see column 1, lines 5 – 8).

Allowable Subject Matter

5. Claim 17 – 20 are allowed.

The following is an examiner's statement of reasons for allowance:

Prior art of record does not disclose, in single or in combination, the limitation of even when the terminal moves, leaving the area of a network and entering the area of another network among said several networks, said apparatus continues to forward packets it received through the existing point-to-point session handed over to the network where the terminal now stays only by changing the output tunnel consisting of one session or a bundle of a plurality of sessions

Art Unit: 2664

through which packets are logically passed to a point in a network in combination with other limitations of claims.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACL

March 19, 2006


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER

